3RD EDITION

FINAL CUT STUDIO

ON THE SPOT

TIME-SAVING TECHNIQUES FOR USING
FINAL CUT PRO AND THE STUDIO APPLICATIONS

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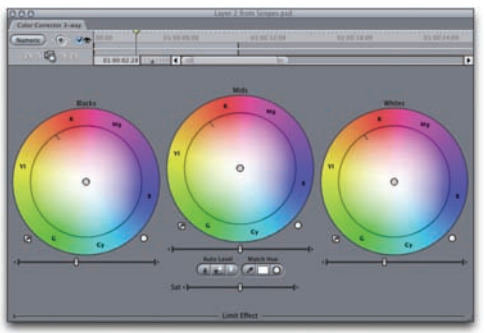
Focal Press

CHAPTER 5

Fixing It in Post

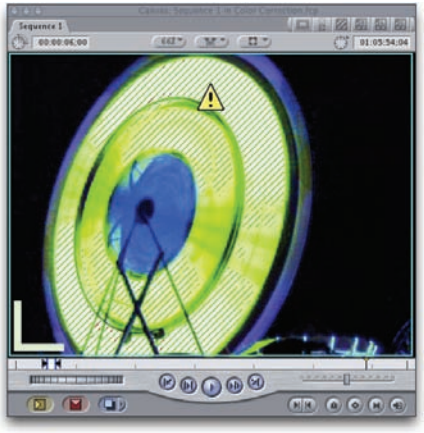
Using Color Correction … You Need It!

Lots of folks open the Color Corrector effect, play for a few minutes, get confused by the scopes, and run. Well, after this chapter, the color corrector will be your best friend.



Use color correction as an opportunity to improve your show. It's the polish that really makes a show stand out. Every shot can be tweaked and improved; too little contrast, the wrong color balance, too much saturation, the whites too hot—the list of problems can go on forever. Here's the best part: With the three-way color corrector and its friends, you can often fix these problems in less than a minute!

Read on, and in no time you'll master the three-way color corrector—and start making it do some pretty slick tricks. Pretty soon you'll even know about using composite modes such as Add, Multiply, and Soft Light. This may all seem pretty scary to an editor ("But I'm not a colorist!"), but hang on, we'll get you there. Plus we'll even dip our toes into Color, the new professional color-grading application from Apple.



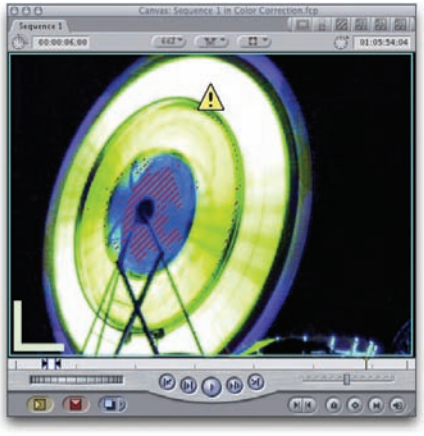


Photo credit Time Image (http://www.timeimage.com/)

Why Is There an Exclamation Point on My Monitor? (Or, Do Zebra Bars Really Grow in My NLE System?)

For those of you in a hurry—and we suspect most of you are—here's a "quick" way to spot problems. Use the Range Check command (View > Range Check). An exclamation point means you have a problem, as do red stripes. Green stripes just mean areas close to the legal limit.

Excess Luma (Control + Z)

If your image is too bright, you'll have problems in a broadcasting environment (and even in nonbroadcast situations too). Be sure your whites don't exceed their limits. Simply apply a Color Corrector 3-way filter and pull the Whites slider to the left until the exclamation point goes away. Although the Broadcast Safe filter may fix the luminance problem, most video can afford a few tweaks to the color balance and saturation. That's where the Color Corrector 3-way filter really shines.

Excess Chroma

If your image is too saturated, you'll often have colors that bleed (or spread) across the screen. Reds and yellows often have this problem. You can use a Color Corrector 3-way, the Broadcast Safe filter, or the new RGB Limit filter to fix this problem. Simply desaturate or clamp the illegal colors. If you have a really oversaturated image, the Broadcast Safe filter won't do the job on its own; be sure to use the RGB Limit filter or Color Corrector 3-way for tough images.

Both

This is how we usually work. We want Final Cut Pro to warn us if there's a problem by popping up the exclamation point. A little work with color correction usually solves the issue. If we have a hard time spotting the trouble area (luminance versus saturation), we'll just switch to one of the specialized views.

Color Corrector 3-way: Yeah, It's That Easy

The Color Corrector 3-way filter can solve many problems (and it's fast!). Most people get overwhelmed by the interface, but the key is to use one slider at a time. We usually work in this order to fix a "typical" shot that's not broadcast safe. Make sure your range check is on for both luminance and saturation, and view things on a broadcast monitor if possible.

1. If needed, rebalance the image by sampling with the eyedropper. You may want to turn Range Check off temporarily so you can get a better selection.
2. Move to the Mids slider to adjust the exposure of the image. To the right brightens, to the left darkens.
3. Adjust the Whites slider. Slide it slowly to the left until your red zebra stripes disappear.
4. Roll the Blacks slider to the left to restore contrast.
5. Readjust the Whites slider and then the Mids slider if needed.
6. Roll a little saturation in (or out) to taste. Be sure to check the image on scopes to ensure your saturation levels are safe.

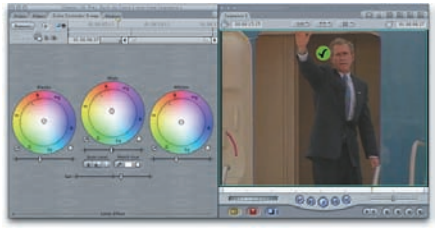


Photo credit Time Image (http://www.timeimage.com/)

Calibrate

If your broadcast monitor isn't calibrated, your color correction is worthless. We freely admit that monitor calibration isn't a forte, and if we wait too long to do it, we usually have to pull out a cheat sheet to remember all the steps. So we'll share this wonderful bit of knowledge with you.

You already own a step-by-step tutorial. It's buried in the *Final Cut Pro User Manua*l, Volume III, page 540. Follow the steps—it works!

Photo credit iStockphoto (http://www.istockphoto.com/)

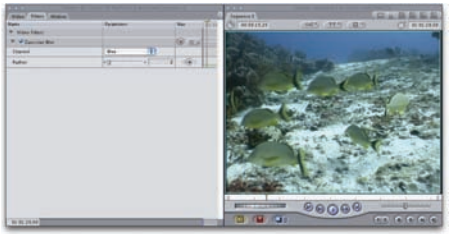


Photo credit Time Image (http://www.timeimage.com/)

A Simple Clean Up for Digital Video Footage Captured In Low Light

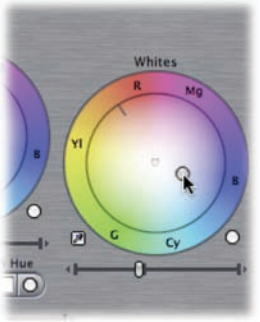
Most people will shoot their video cameras in any type of light, but unfortunately that doesn't always provide the best type of image. Single-chip video cameras were just not made to handle low-light recording, but that doesn't mean you can't use the imagery. So try a trick that digital still photographers use: Run a one- or two-pixel Gaussian Blur filter on just the Blue Video channel. Don't do too much more, or the footage will start to "bloom" or soften in color.

By Gary Adcock, Studio 37, Founder of the Chicago FCP User Group

Photo credit Time Image (http://www.timeimage.com/)

Playhead Sync

You've applied color correction to a clip in your Timeline and want to access the controls. You double-click the clip, make some adjustments, and go to the next clip. Somewhere along the way you forget to load the clip that you had wanted to work on. Only after several clicks do you discover that you've messed up a shot by color correcting the wrong item. The Viewer can keep up with what you're doing in the Timeline automatically. In the Viewer, there's a drop-down menu for playhead sync. Setting the Viewer to Open will automatically open the shot at which you're looking at in the Timeline. This is very useful for color correction or other effects work.



Quick Adjustments: Gear Up

Most of the time, holding down the Command key slows down your sliders. In the Color Corrector 3-way filter, it sometimes has the opposite effect. If you're trying to remove colorcast or quickly roll the hue, hold down the Command key to make quick adjustments in the color wheel areas. In other areas of this filter, it serves as a Gear Down command and will slow the dragging of the handles.

Using Eyedroppers: You'll Poke Your Eye Out

Inside the Color Corrector 3-way, you'll see three eyedroppers in the upper area. These are useful for fixing color balance. Think of this as white balancing in post; we've even fixed video shot on the wrong camera preset.

1. Use the Whites eyedropper to click on something that should be white. Don't go for the whites of someone's eyes; go with a large area such as a wall.
2. Use the Blacks eyedropper to click something that should be black.
3. The Mids eyedropper really only works when using a chip chart or something with 50-percent gray.
4. If the color balancing is overcompensated, you may need to drag back toward the center in the color wheel.

Photo credit Time Image (http://www.timeimage.com/)

Taking Something Away

Here's a way you can make finely shot footage look aged. In the early days of film, many of the film stocks weren't very saturated with color, and more often the footage had the look of a hand-colored black and white film. Final Cut Pro lets you to get this look in another one of the real-time Color Correction filters.

Select Filters > Color Correction> Desaturate (Highlights or Lows)—Highlights and Lows are actually the same filter, so don't be confused.

This filter is used to desaturate (or remove) the color in an image higher or lower than the 50-percent luminance threshold. This can create some useful visual transitions if you're coming out from black and white footage or a still image into moving video. Ramping the effects of this filter as part of the transition will give your finished piece a more filmic look.

By Gary Adcock, Studio 37, Founder of the Chicago FCP User Group

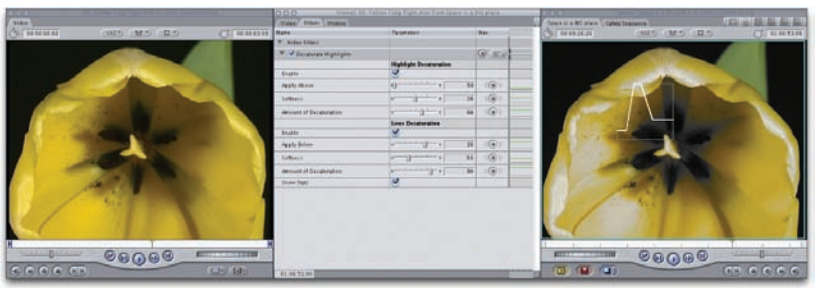


Photo credit Time Image (http://www.timeimage.com/)

Backwards Thinking

When color correcting, you'll often need to see the difference between where you started and where you are. Fortunately, Final Cut Pro allows you to compare your current frame to others in the Timeline.

1. Switch to color correction arrangement. (Layout > Arrange > Color Correction).
2. Underneath the scopes is the Frame Viewer tab; switch to it.
3. The Frame Viewer's default is a vertical split. On the left is the current frame (green control handles), and on the right is the current frame without any filters.
4. Switch one of the sides to see the previous frame. Now you can compare your color correction to the previous shot. The popup list provides other comparison options that you might find useful as well.

By Jeff I. Greenberg, Principal Instructor, Future Media Concepts

Photo credit Time Image (http://www.timeimage.com/)

Composite Modes: Add It Up

Dark video? That never happens to us, of course, but we hear this is a good fix. If you have a shot that's really dark, you can use the screen mode to lift the details out.

1. Place a cloned copy of the dark shot above itself (Option + drag and then hold down the Shift key).
2. Contextual-click and change the composite mode. Add works well to combine the lightest elements.
3. If it's too light, reduce the opacity of the top clip. If it's too dark, clone an additional copy on a third track.

This works great on surveillance/security video, as well.

Your Color Is Garbage (Matte, That Is)

By using two (or possibly three) effects, you can create striking areas of focus. Darkening, brightening, and/or color correcting selective parts of a frame will do this. Essentially, we're using an Eight-Point Garbage Matte effect to create a portion of a clip on top of itself. By using soft edging, it'll blend from the effected area to the unaffected area.

1. Clone a copy of the clip above itself in the Timeline. Select the clip with the Selection Tool, and then drag straight up while holding the Option and the Shift keys.
2. On the top clip, add two effects, an Eight Point Garbage Matte (Effects > Video Filters > Matte > Eight-Point Garbage Matte), and a Color Corrector 3-way filter.
3. Load the upper clip in the Viewer, and access the Filters controls.
4. Click each of the plus signs after each point (point 1, point 2, and so on), and work your way around the area in the image. Once you click a plus sign, go over to the Canvas, and click and drag until the dot is where you want it to be. You don't have to drag the dot from its initial position—you can just click and hold, and the dot will jump to where you're clicking. It takes a moment as you drag for the screen to update.

5. Go down the Filter parameters, and feather and smooth the effect. If you solo the track (V2 in our case), you'll see that only part of the clip is now visible, and it has soft edges.
6. Deciding that we're happy with the area, we wanted to darken everything else. We selected the Invert checkbox on the Eight-Point Garbage Matte filter, which left us with just the background.
7. Before you leave the Eight-Point Garbage Matte effect, make sure to go to the Preview pull-down menu, and select Final.
8. Go to the Color Corrector 3-way filter, reduce the saturation, and reduce the Black slider and the Mid slider, making a darker background surrounding a "hole" that shows through to V1.

By Jeff I. Greenberg, Principal Instructor, Future Media Concepts

Photo credit Time Image (http://www.timeimage.com/)

Keyframing

Sometimes problems in a shot just pop in and out (like relatives). Or maybe the color issue changes over time. Don't worry; you can keyframe the Color Correction effects to make gradual fixes. In the upper-left corner of the visual interface of the effect is an Insert/Delete keyframe button. By clicking this you'll add a keyframe for all properties. This can be useful if you want to adjust the midtones and saturation to simulate lighting effects over time. In fact, you can even pull off a "time lapse" effect with lighting sources.

A Spot of Color

You can use this specialty effect to add dramatic emphasis to a shot by leaving only one color and stripping the rest. To pull this effect off, you'll need to use the Color Corrector 3-way filter. This effect works best on clip with a dominant color region.

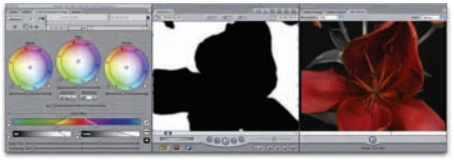
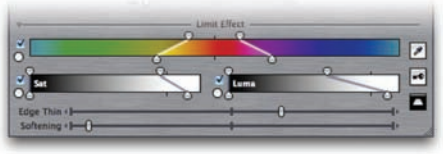


Photo credit Time Image (http://www.timeimage.com/)



1. Apply the Color Corrector 3-way filter, and access the filter's visual controls.
2. Using the Select Color eyedropper in the Limit Effect controls, select the desired color you'd like to keep.
3. Click the key icon to view the matte. Use the Select Color eyedropper while holding down the Shift key to add to the matte.
4. Finesse the matte by adjusting the Width and Softness sliders for the Chroma, Saturation, and Luma values in the Limit Effect controls. When the desired color is clearly selected, there will be no holes in your matte.
5. Click the key icon twice to toggle back to View Final.
6. Slide the Saturation slider to the left to desaturate the clip.
7. At the bottom are controls to tweak the effect. Check the Invert box at the bottom of the parameters list. Adjust the Thin/Spread and Softening sliders to enhance the effect.

A Frame with a View

There's even more to love about the Frame Viewer:

- The border between the green/handles allows you to change the area where you're splitting the frame.
- The three buttons on the bottom are great:
    - V-Split allows you to vertically split the frame.
    - Swap allows you to swap sides.
    - H-Split allows you to horizontally split the frame.
- The pull-down menus permit you to look at shots ahead or behind your current location in a number of different ways to compare the clip you're correcting. This is great for continuity with skin tones.

By Jeff I. Greenberg, Principal Instructor, Future Media Concepts

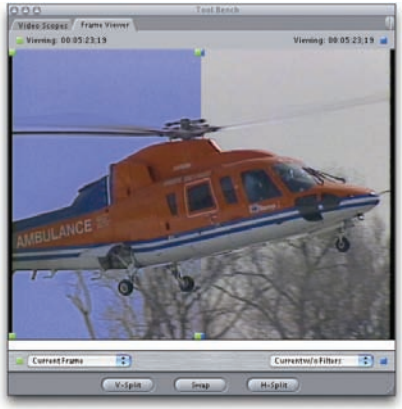


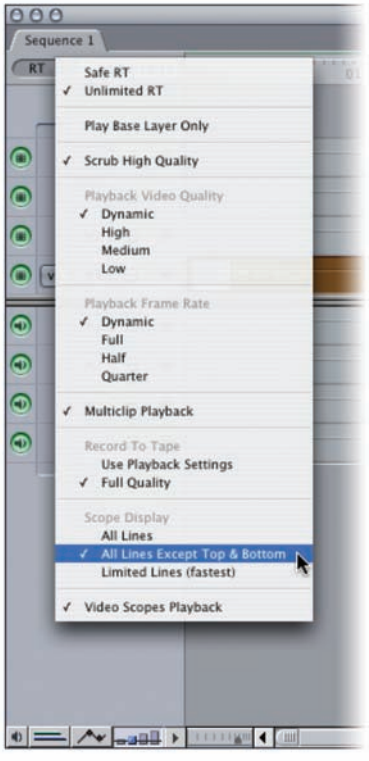
Photo credit Time Image (http://www.timeimage.com/)

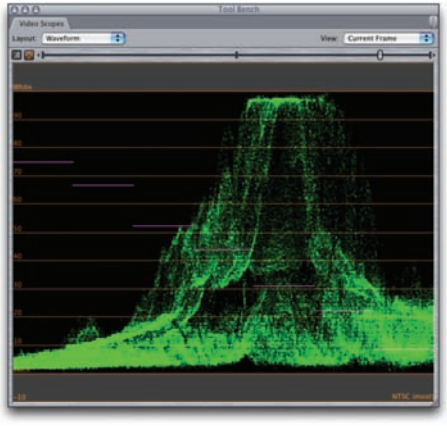
One Hot Spot

Have a problem in just part of your image? There are two approaches worth taking:

- **Color Corrector 3-way filter:** The best method is to select the hot spot with the Limit Effect command. Base your selection solely on the luminance (ignoring saturation and hue). Be sure to feather your selection significantly. Now your adjustments to the Mids and Whites sliders will be much more gentle.
- **Broadcast Safe filter:** This filter will clamp most illegal levels and knock them into place. It can sometimes lead to banding, but it's fast and easy to apply.

Photo credit Time Image (http://www.timeimage.com/)





Video Scopes ... Seeing Your Whole Picture

As you do more color correction and grading in FCP you'll quickly become best friends with the scopes. One thing to know about is that you can change your scopes to adjust how accurate (or not) they are when analyzing your picture.

1. Make sure you open the scopes by choosing Tools > Video Scopes or Option + 9.
2. In the Timeline choose the RT pull-down in the upper left-hand corner.
3. Under Scope Display, choose whether the scopes will be analyzing All Lines, All Lines Except Top and Bottom or Limited Lines (fastest).

Confused about the differences between these modes? Here's what's going on.

- **All Lines:** Every scan line is analyzed and then displayed in the scopes.
- **All Lines Except Top and Bottom:** Analyzes and displays all lines except for the top and bottom nine lines. These lines are ignored because information like sync and closed captioning are present in these lines.
- **Limited Lines (fastest):** Final Cut Pro scans 32 lines distributed evenly across the entire footage, which most of the time is good enough to get an idea of what's going on with the footage.

The catch about these different modes is that during playback only Limited Lines (fastest) is used. If you have selected another option only when paused or while scrubbing will FCP display the more accurate scopes.

IRE versus Percentage

When talking about video scopes you often hear people describe video levels in IRE (Institute of Radio Engineers) units and also in percentages. What's the difference? Put simply IRE units measure analog video, while digital video is measured in percentages.

Which one you use depends on where you're measuring the video. If you measured the video on a digital scale (like in FCP) you'd be measuring in percentage. If you measured on an analog scale (like a Hardware CRT scope) you'd be measuring IRE. Don't worry, though, if properly setup, 100% equals 100 IRE and 0% equals 0 IRE.

The Scoop on Scopes

You've probably heard from various people that if you're going to do any serious amount of color correcting or grading, that it's wise not to rely on software scopes but to invest in a "real" set of scopes. Well, what does that mean?

To understand this, let's take a look at the three categories of scopes so you can choose the one that best matches your needs.

- **Hardware (CRT):** These are the scopes that people are generally referring to when they talk about hardware scopes. Found in millions of edit suites, these scopes can be SD or HD or both, and can offer a wide range of input options. These scopes use CRT tubes (yep, just like your old TV) to draw the image on their screen. These scopes, if properly calibrated and maintained, can be extremely accurate. Accuracy comes with a price—literally! These scopes (especially for HD versions) are very pricey! Lastly, different types of scopes like parade, vectroscope, etc., often have to be purchased separately as individual units, thus adding to the overall cost.
- **Hardware (Rasterizers):** This type of scope is becoming very popular and generally is more customizable and flexible than a CRT-based scope. These scopes work by having a hardware component (cards in a computer) process incoming video and audio signals and then display information on a computer monitor. Because functions are controlled via software, these scopes can easily be calibrated and updated as needed. While still expensive basic units are not nearly as expensive as CRT-based scopes. Additionally, rasterizers often include a wider variety of scope types than the CRT-based scopes.
- **Software Scopes:** These scopes are built into the software program you're using (FCP, Color, etc). This type of scope often gets a bad wrap for not being accurate, but this isn't always true. The scopes in FCP, for example, can read every pixel on every line of video—now that's accurate! Another big plus of software scopes is that they don't require an additional expense as they are bundled with the software.

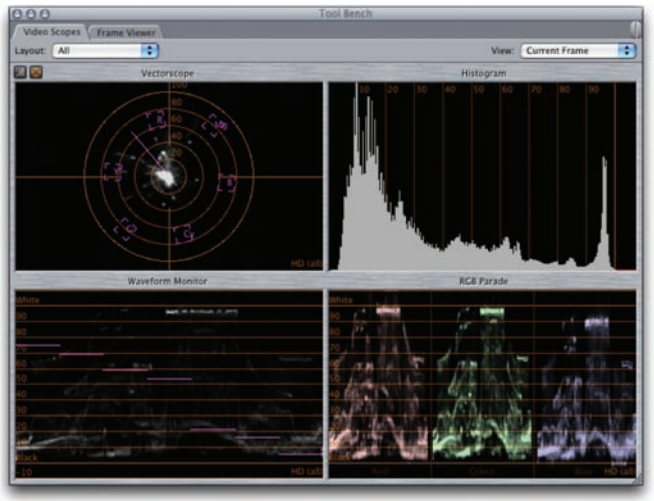


Photo credit Time Image (http://www.timeimage.com/)

Make Your Gray Skies Blue

It's not unusual for your skies to be washed out. This is often a problem, because video doesn't offer the same dynamic range as film (the difference between darks and highlights). Fortunately, Final Cut Pro allows you to isolate the color correction, so you can achieve a fix just to the problem area.

1. Apply the Color Corrector 3-way filter, and access the filter's visual controls.
2. Using the Select Color eyedropper in the Limit Effect controls, select the desired color you'd like to keep.
3. Click the key icon to view the matte. Use the Select Color eyedropper while holding down the Shift key to add to the matte. You can click in the Viewer or Canvas window.
4. Finesse the matte by adjusting the Width and Softness sliders for the Chroma, Saturation, and Luma values in the Limit Effect controls. When the desired color is clearly selected, there will be no holes in your matte. Also, adjust the Softening slider to improve the matte. You may get a better matte by using fewer limiting ranges.
5. Click the key icon twice to toggle back to View Final.
6. Adjust the color balance wheels and saturation of the shot.

You may need to add a second color corrector to finesse the scene or isolate another problem area.

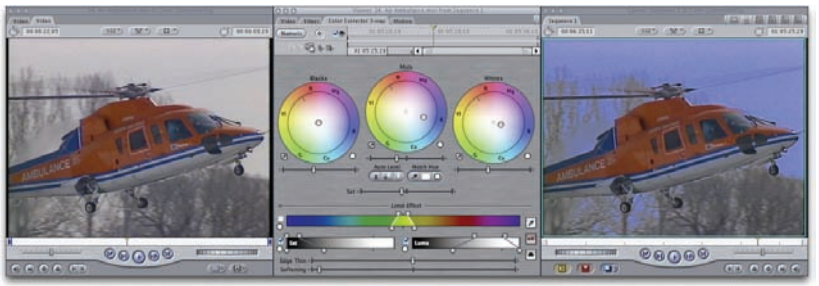
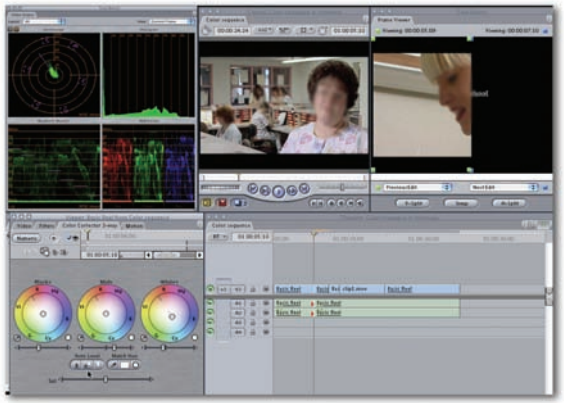


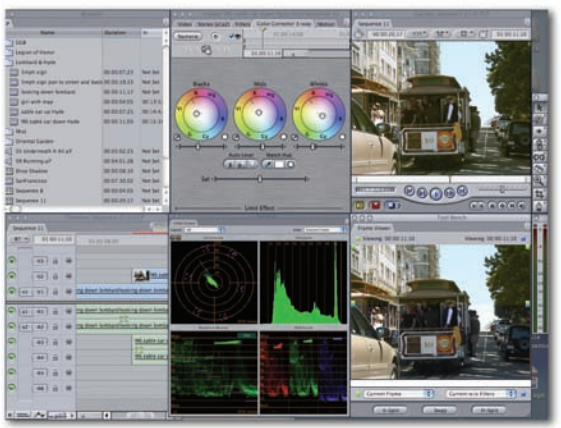
Photo credit Time Image (http://www.timeimage.com/)

The Ultimate Full-Color Spread

We're about to make your entire screen a mess (it'd be much better at this point to have that Cinema Display or a second screen.) Now that you understand what is possibile with the Frame Viewer, you can have more than one Frame Viewer. To build an entire layout dedicated to color correction, follow these steps:

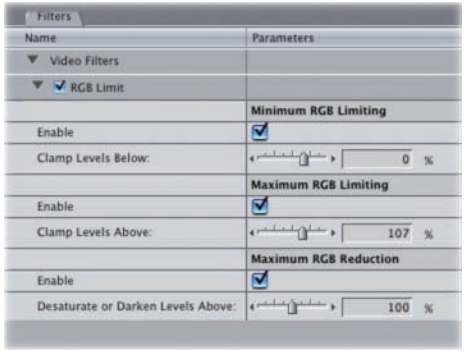


1. Move your Viewer down to the lower-left corner (more on that later).
2. Add scopes and move them to the upper-left corner.
3. Tearing off the Frame Viewer, move it to the top row of windows (upper-right corner).
4. In our screen capture we've already added a Color Correction effect to the shot. We've changed the Frame Viewer to show Next Edit and Previous Edit. This way we can maintain a "look" from shot to shot.
5. Rearrange your Viewer on top of the Browser, making sure to just leave a little space to mouse over the Browser if necessary.
6. Position the Timeline to sit in the bottom right.
7. Use the up and down keys to go from shot to shot.
8. The Color Corrector controls are directly under your scopes—making them easy to glance up at.
9. Is this cramped? Absolutely. Go get a second monitor (or a nice 20-inch, 23-inch, or 30-inch Cinema Display). Most editors swear by having a two-monitor system (and others swear by just a one-monitor system).



Note: An alternate approach to setting up your windows is also suggested by author Tom Wolsky and is shown in the lower figure. Be sure to experiment and find a layout that works well for you.

By Jeff I. Greenberg, Principal Instructor, Future Media Concepts



Go Ahead—Limit that RGB

One area that many people don't understand when color correcting and grading their footage is maintaining legal RGB levels. RGB? I thought most digital video was $Y'C_BC_R$, you're probably thinking (if you're a geek like us!).

Well, you're right, but at some point, it's a pretty safe bet your footage will be displayed on an RGB device. Also, some conservative broadcasters might reject a master tape with illegal RGB values. Both are reasons to maintain legal RGB values.

Fortunately there is help! Final Cut Pro 6 includes a filter called RGB Limit. You can apply it to ensure legal RGB levels. Here's how the controls work:

- **Minimum RGB Limiting:** Here, you can choose whether to activate clamping at a certain percentage using the Clamp Levels Below control. RGB values that fall below the percentage you define will be clamped or brought up to the percentage you define. Its default is 0%.

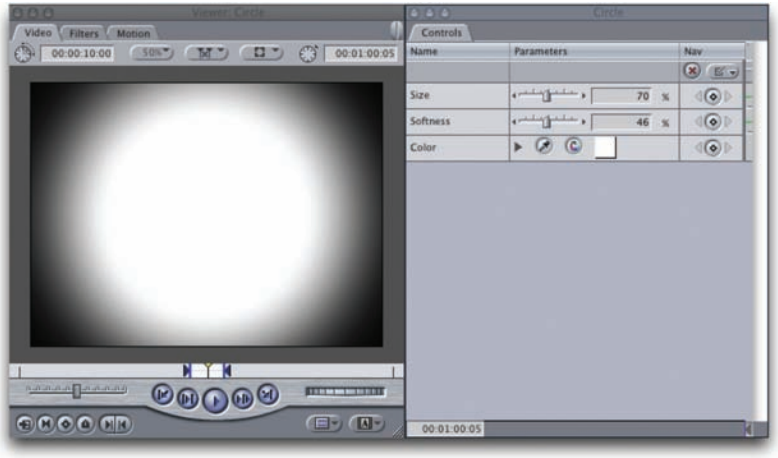
Photo credit Artbeats (http://www.artbeats.com)

- **Maximum RGB Limiting:** As the name suggests, these control the maximum RGB values for your video. Using the Clamp Levels Above control, you define the percentage where clamping will take place, meaning that RGB values above the percentage you define will be clamped or brought down. Its default value is 107%. Our feeling is that this is probably okay for most broadcasters, but if you want to be extra safe, a value of 100% would be best.

- **Maximum RGB Reduction:** Here you control at what percentage portions of the signal will be desaturated or darkened (in that order). In other words, after clamping has been applied any part of the signal that is above the percentage you set with the Desaturated or Darken will be desaturated or darkened. Its default is 100%.

Power Windows: Simple Vignettes

When color correcting and grading a show, we use vignettes all the time. Vignettes are a simple way to draw a Viewer's attention subtly to a person's face or some other object on screen. Here is an easy way to create a customizable vignette in Final Cut Pro.



1. Using the Video Generators pull-down in the Viewer (or in the Effects tab of the Browser), choose Shapes and then the shape you want. Circles and ovals work well.
2. Edit that shape onto the Timeline one track above the video you want to effect. Make sure it's the same length as the clip below.
3. Right-click on the shape and choose Composite Mode > Multiply.
4. You should see your video displayed inside of the shape you created. Not quite what you were thinking? Don't worry, let's customize it.
5. Turn on your clip overlays and drop the opacity of the shape layer down to something like 30%.
6. Double-click on the shape to load it back into your Viewer. Click on the Controls tab and adjust the size and softness of the shape. Higher softness values will make the vignette less noticeable, but don't push it too far or you'll lose the effect.

A Bigger Box of Crayons—FCP Plugins

If color correction and grading is important to you (we're certified junkies) then you should really check out some of the great third-party tools that are on the market. There is some overlap between these three manufacturers, so be sure to download the demos and try things out.

- **Nattress Productions:** This manufacturer offers several powerful tools for processing video; in the color correction and grading space there are a few standouts. The **Film Effects** package offers great control over 3:2 pull-down, 24p conversion, and de-interlacing. Plus it has a great library of preset looks, proper film-style dissolves, sharpening, and gamma control. Another option is their **Big Box of Tricks**, which offers several filters (more than 70). The package includes several plugins that fix specific image problems such as noise and flicker. Plus the package offers great control over levels, curves, and image stylization effects. (http://www.nattress.com)

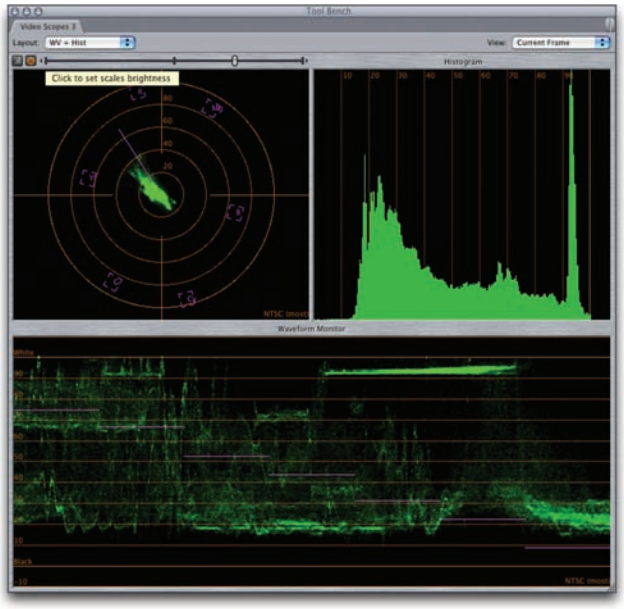
Photo credit Artbeats (http://www.artbeats.com)

- **Magic Bullet:** The latest version of Magic Bullet is a suite of products that consists of three different products. **Magic Bullet Looks** allows for the creation of special looks that process your image. There are several presets as well as great options to customize. **Magic Bullet Frames** offers conversion from interlaced material to 24p. **Magic Bullet Colorista** allows for powerful color correction. (http://www.redgiantsoftware.com)
- **Noise Industries:** The **Editing Pack** offers several useful tools for improving video images. A strong collection of blurs is complemented by a Dewrinkler filter for improving skin. The Vignette and Matte Generator also offers several options for creating interesting power window effects. (http://noiseindustries.com)

Help! My Scopes Are Hard to See

By default, the scopes in Final Cut Pro use light lines to signify their results. That's fine and all, but that doesn't mean you have to like it. Simply contextual-click a scope, and you can access several different display options that may help you see your results more clearly (such as making them green).

Plus, in Final Cut Pro 6, there are two buttons at the top of each scope that let you adjust the brightness of the scales and display data.



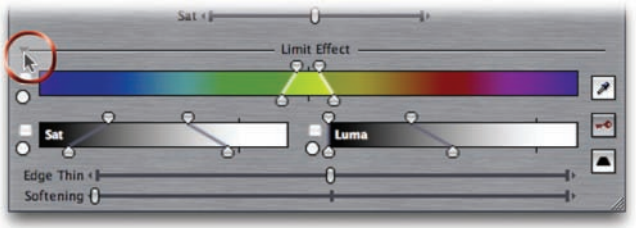
Help! My Scopes Are Too Small

Oftentimes you may want to see multiple scopes at once. You had this option before, because Final Cut Pro allowed you to view groupings of scopes. Now, however, you can have more than one scope window. In fact, you can have up to six (which is more windows than unique scopes—go figure). Simply choose Tools > Video Scopes (Option + 9) repeated times to add scopes.

Pandora's Box

When the Color Corrector 3-way filter was introduced, there was a lot of confusion. Everyone seemed to be drawn to the controls at the bottom of the screen. They wanted to tweak and fiddle, and pretty soon people started complaining they couldn't get consistent results.

Those controls are for limiting the effect. This is called secondary color correction and is for isolating your touchup to specific areas. Unless that's what you want, don't touch! Fortunately, these are now in a hidden area of the interface of Final Cut Pro.



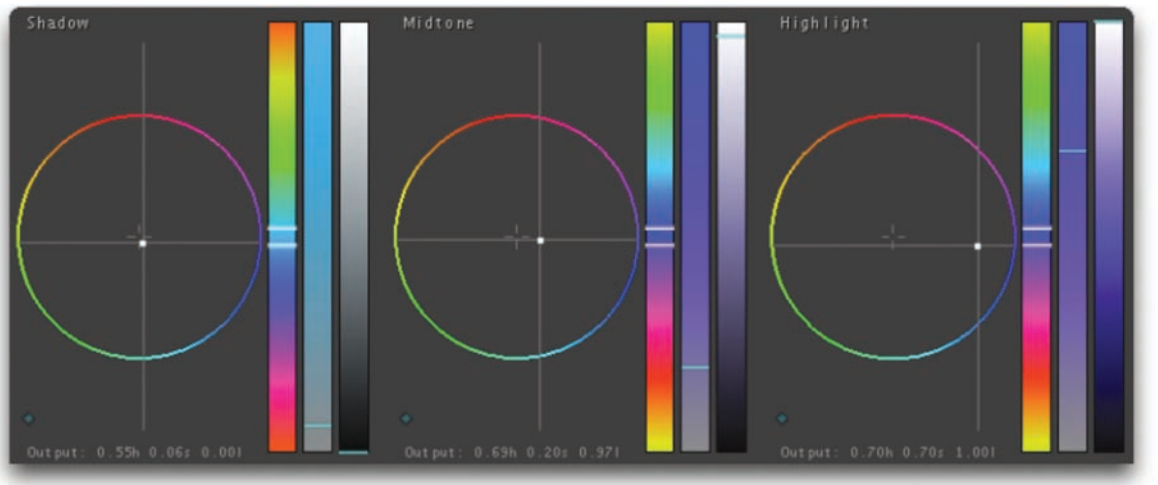
A Helping Hand

When Color was first introduced, any sort of color correction that was done in FCP was ignored when the sequence was brought into Color. This was a bummer because many people wanted to use Color's toolset to expand upon their initial corrections in Final Cut Pro. This changed in version 6.01 of Final Cut Pro and Color 1.0.1. Corrections that were done in Final Cut Pro can now be brought into Color.

There is a catch, well, two catches (actually):

- First, only the Color Corrector 3-way will come into Color. It's translated as a correction in the Primary In room.

- Second, because FCP operates in $Y'C_BC_R$ color space and Color operates in RGB, the Color Corrector 3-way will have to be translated, which could result in some shift of the correction.



Joy in Repetition

Although "Joy in Repetition" is a great song (look it up!), the same can't be said for color correction in Final Cut Pro. Let's see, you've color corrected one interview (and it looks great!). At some point, that person is going to pop back into your show.

Let's see:

- Same person
- Same location
- Same camera
- Same lighting

We bet you can use the same color corrector. Simply drag the effect icon off to a bin. Name the effect so you can easily find it. Now you can drag the effect preset onto your new clip. Unless something dramatically changed, the effect should work. If you do need to tweak, you're at least five steps closer to "done."

It's a Wash

Need to put some life into washed-out video? Composite modes can be used to increase saturation and contrast. Simply place a cloned copy of a clip on the track above itself, and change its composite mode. Be sure to experiment with the several different modes to get alternative looks.

Photo credit Artbeats (http://www.artbeats.com)

Choosing Final Cut Pro or Color

One conundrum that Color poses is you now have another choice besides Final Cut Pro for color correction and grading, so how do you decide which one you should use? Unfortunately, there is no simple answer for that.

In general, we have found projects that require more grading than simple correction, benefit immensely from Color, while many corporate communication and lower budget broadcast pieces can be corrected more efficiently using Final Cut Pro. With that said, however, the choice is ultimately dependent on your workflow. Here is some food for thought:

Consider Using Color for color correction and grading if:

- your primary role is that of a colorist. Color will provide you with most of the tools required to excel in that role.
- you require much finer control over your image using features exclusive to Color, like curves, multiple secondary color corrections, and scan and pan.
- you must meet strict broadcast standards. We have found Color's broadcast safe controls to be more exact than Final Cut Pro's.

Consider using Final Cut Pro for color correction and grading if:

- color correction and grading are among many tasks that you need to complete. Final Cut Pro is multifaceted while Color pretty much excels only at correction and grading.
- if speed is your primary concern, use Final Cut Pro. Because you never have to leave the Final Cut Pro interface, your workflow should be faster than going to Color, where you will have to render and possibly render again when coming back to Final Cut Pro.

- the project is still in an intensive editing phase, but for some reason you want to do some color correction now. Since the Color Correction filters travel with the clip inside FCP, minimal effort is required for adjustments.
- you need to color correct and grade stills, Motion and LiveType projects, text and other generators. These items will not appear in Color.
- you don't have the time to learn Color and are already proficient with the color correction and grading toolset inside of Final Cut Pro, and that toolset meets your needs.

Lastly, if you do plan a Color workflow, it is a good idea to consider at what point you should send the project to Color. It can be very frustrating and sometimes technically complex if you've started correcting a project and then half of the show gets re-ordered. For that reason, it's generally a good idea to wait until the picture lock has been achieved on the project before sending it to Color for correction and grading.

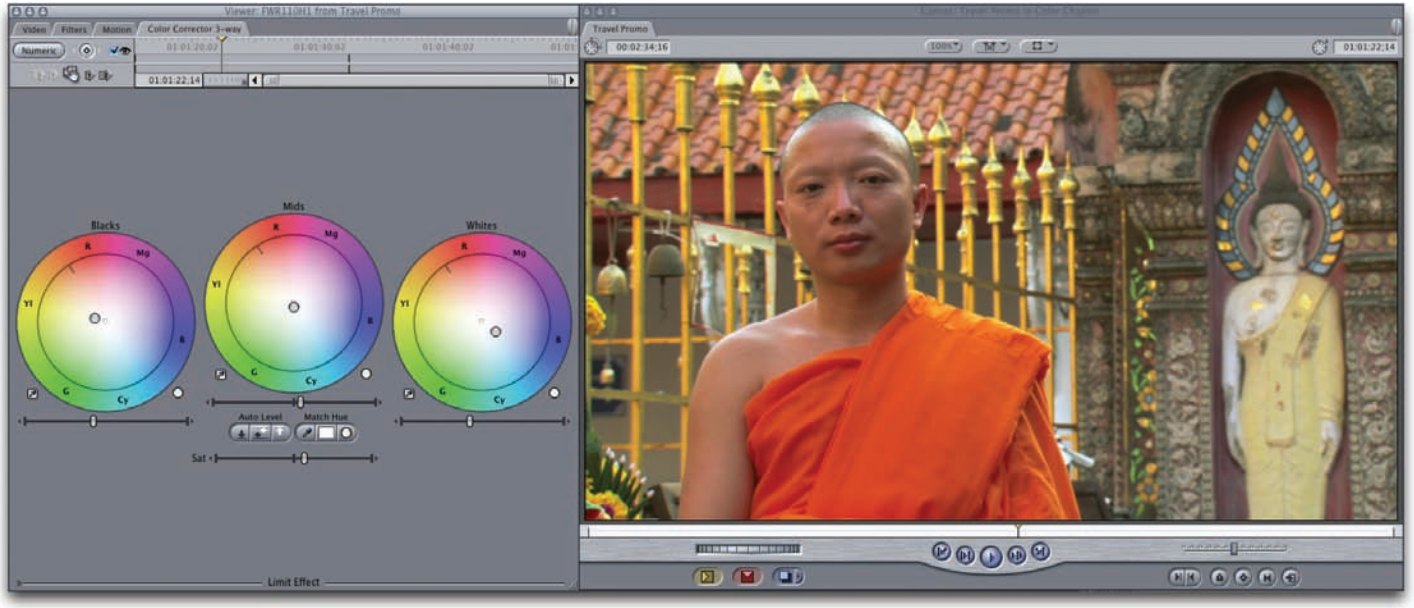
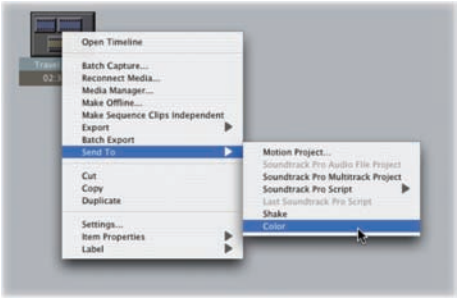


Photo credit Artbeats (http://www.artbeats.com)



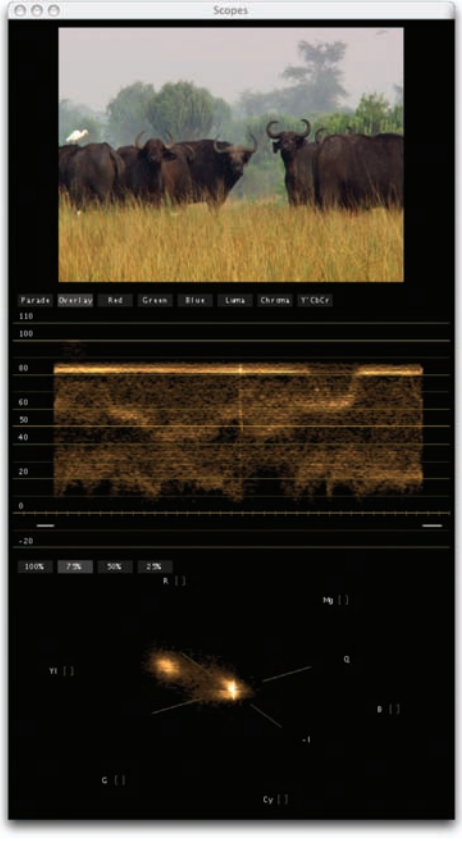


Photo credit Artbeats (http://www.artbeats.com)

Get It In—Color, That Is

We love Color! Finally, we have a professional-level color correction and grading tool. It is important to know, however, that when you send a sequence to Color, there are limitations. And depending on your project, some of these limitations can be important.

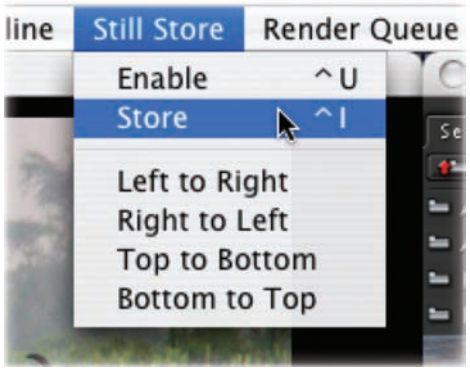
- Most filters that you have applied in Final Cut Pro will not be previewed or rendered by Color. Once you have rendered and sent your project back to Final Cut Pro from Color, the filters you've applied will once again take effect. This is especially important for Color Correction or Image Control filters (with the exception of the Color Corrector 3-way which is translated as a correction in the Primary Room in Color). Prior to sending to Color, it's a good idea to remove those filters, as you might get weird results when your project has returned to Final Cut Pro and those filters are again active. In general, you want to choose either Color or Final Cut Pro to do your color correction and grading work, and not mix the two.
- Track layering will be maintained in Color, however Opacity and composite modes will not be previewed or rendered out of Color. Instead, this information is maintained and rendered in Final Cut Pro.
- Like filters, transitions are not previewed or rendered by Color, instead, the transitions are rendered when the project returns to Final Cut Pro.
- Speed effects are maintained and previewed by Color (although variable speed effects do not play properly in Color). They aren't, however, rendered by Color; instead, Final Cut Pro renders them.
- Generators like text and shapes, still frames, Motion and LiveType Project files that are in your sequence are ignored by Color and will not be previewed. Their position on the Timeline is maintained and when the project is sent back to Final Cut Pro, they will relink and be displayed again.
- If you do need to color correct or grade generators or graphics material, you will need to render them out of Final Cut Pro as self-contained QuickTime files and reedit them back into your sequence.

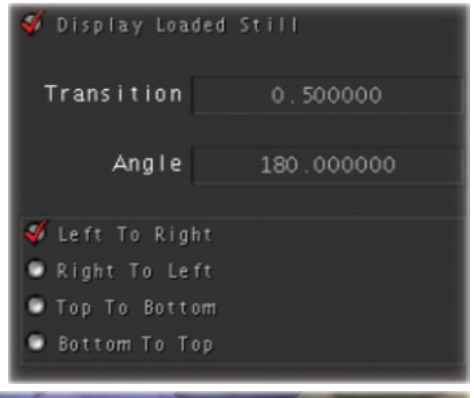
Still Store It

One of the challenges of color correcting and grading a show is making sure that your color and "looks" that you've applied to shots are consistent over the course of the entire show.

Most of the time, trusting your memory about what a previous shot looked like is a bad idea. Also, always having to flip-flop back and forth on the Timeline is a pain. Color has a great tool called Still Store for helping with these problems. Here's how it works:

1. Find a shot you want to store. Choose Still Store > Store (Control + I).
2. Move your playhead in the Timeline to another clip.
3. Choose the Still Store Room (Command + 7).
4. Notice the clip that you just saved (along with previously saved clips) appear in the room.
5. Select the thumbnail of the shot you saved and click the Load button in the bottom right-hand corner of the room.
6. In the upper right-hand corner of the room, check the radio button next to Display Loaded Still (Control + U).
7. In the Preview display you should now see a side-by-side comparison of the clip you're currently on and the loaded one from Still Store.
8. Using the Transition and Angle controls in the Still Store Room you can adjust how the images are being split. Using the radio buttons below these controls, the Preview window will snap to presets as labeled (left to right, right to left, etc.).





The Quick Copy in Color

Oftentimes when color correcting and grading you'll find the need to copy corrections and grades from one clip to another. For example, maybe an angle of a character appears multiple times throughout a sequence. Instead of redoing the correction, which can lead to consistency issues, copy the grade. A quick way of doing that is simply by dragging.

1. Grade the first shot to your liking.
2. You'll notice that after you move your playhead off of that first clip the grade appears under the clip as a bar labeled P1 (P stands for primary). You can have up to four primary grades (P1, P2, etc.) and eight secondary grades (S1, S2, etc.).
3. To copy a grade from that first clip simply select the P1 bar (or P2, etc.) and drag it to your new clip. The new grade has been applied to the clip.

If you're more of a keyboard or menu person you can also copy grades from the currently selected clip by choosing Grade > Copy Grade. Notice you can actually "store" five different grades and if you want, use keyboard shortcuts. To paste a grade, simply go back to the Grade Menu > Paste Grade and choose the number that you had previously saved to.

The only catch is when you copy a grade using this method, it's not storing an individual grade but rather all of the grades (both primary and secondary) for that clip. So when you paste the grade, all of the primary and secondary grades will be pasted.

Note: The words grading and color correcting are often used interchangeably. In the strict sense, correcting would be just that; "correcting" a shot that has problems, where grading refers to giving the shot a "look."

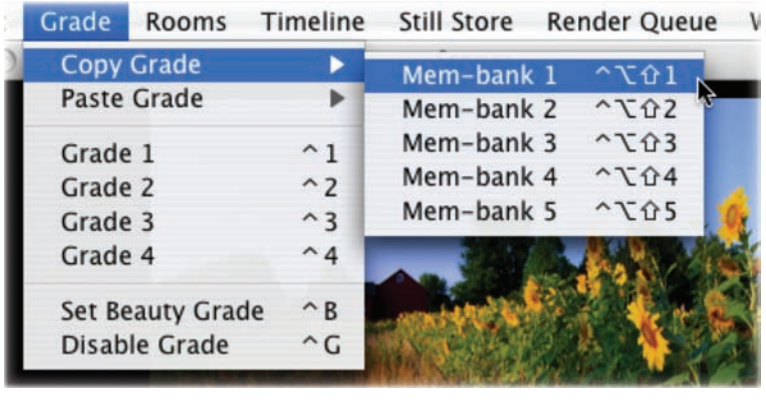
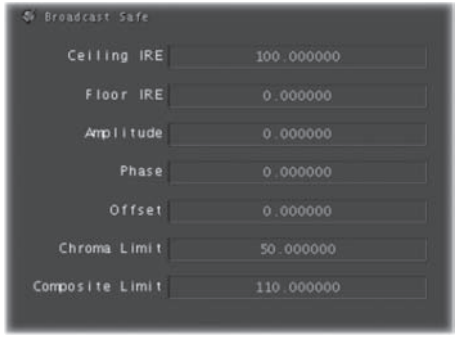


Photo credit Artbeats (http://www.artbeats.com)

Using Color for Broadcast Safe



Have you been getting varying results from Final Cut Pro's Broadcast Safe filter? When you have to be sure that every pixel in your footage is legal, you need a hardware legalizer! Don't have thousands of dollars for one? Here is another option.

Color has very robust Broadcast Safe options. We've found using Color for broadcast safe is a safer option than using FCP's Broadcast Safe filter. Even if you don't do any corrections, you can still take advantage of Color's broadcast safe features.

1. Send your sequence to Color by choosing File > Send To > Color.
2. In Color, choose the Setup Room (Command+1) and select the Project Settings tab.
3. In the upper right-hand corner of the room you'll notice the Broadcast Safe category. Make sure this option is checked.
4. You can adjust the controls here as you see fit (check the Color user manual for a description of each control).
5. After you're done with your corrections (or not, depending on if you want to use Color simply for broadcast safe) choose Render Queue > Add All and then Render Queue > Start Render. Your footage will render.
6. Then Choose File > Send To > Final Cut Pro.
7. Back in FCP open up the new sequence (noted with (from color) at the end) and check out the results.

Photo credit Artbeats (http://www.artbeats.com)

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Paul Saccone
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Douglas Spotted Eagle
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Paul Temme
Mark Weiser
Tom Wolsky

Comments on the Previous Editions

What a breath of fresh air! What we're seeing here is the first of a new breed of books for more advanced users of FCP. As Certified Apple Instructors of FCP, it is obvious these guys know their stuff. By delivering the material with wit and humor, the authors make this a breezy yet informative read indeed. . . . Among all my FCP books, "Final Cut Pro On the Spot" is quickly becoming one of the most dog-eared! I highly recommend this book for folks who are motivated to take their knowledge of FCP to new heights.

Kevin Monahan, Co-Chair SF Cutters, San Francisco FCP User Group

In what's becoming a crowded field of Final Cut reading options, this book stands out. It is a must-have for FCP users of all levels. A clever combination of practical tips in combination with power user and even system troubleshooting that will keep your FCP sessions purring. Kudos to the authors!

Orlando Luna, Founding Member, South Florida FCP User Group

Learning and using Final Cut Pro is not only about basic processes, but also a matter of always improving workflow and finding better ways of achieving results. How do you discover those special techniques or tricks that enable you to work with FCP in a more seamless manner? "On the Spot," by Richard Harrington and Abba Shapiro, is filled with them. . . . I've learned many important, and some just cool, techniques that I would never have discovered on my own.

Ken Stone, www.kenstone.net

If you're going to spend your money on learning Final Cut Pro, then spend it on something that is much more than a rewritten manual. This book not only teaches you what you need to know to get started with Final Cut Pro and the apps that come with it, but provides you with wonderful tips and tricks, most of which you won't get anywhere else.

Michael Horton, President, Los Angeles Final Cut Pro User Group